

What is claimed is:

1 1. A method for evaluating security executed to a system
2 constituted by at least one component, by the use of an
3 electronic computer, the method comprising steps of:

4 a first step of accepting a first specification of a
5 system to be evaluated and a second specification of each
6 of the components constituting the system, from an operator
7 via an input unit connected to the electronic computer;

8 a second step of retrieving data from a database in
9 which constituent components and security countermeasures
10 to be executed to the constituent components are described
11 for each of system types, and of reading out security
12 countermeasures to be executed to the components
13 constituting the system to be evaluated which are specified
14 by the second specification, out of the constituent
15 components of the system type, the system type
16 corresponding to that of the system to be evaluated which
17 is specified by the first specification;

18 a third step of displaying on a display unit
19 connected to the electronic computer, the security
20 countermeasures read out in the second step in
21 correspondence with each of the components constituting the
22 system to be evaluated which are specified by the second
23 specification and of accepting from the operator via the
24 input unit, information whether or not each of the security

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25 countermeasures being displayed is executed; and
26 a fourth step of evaluating a state of security of
27 the system to be evaluated, based on the information that
28 the security countermeasures of the components constituting
29 the system to be ~~evaluated~~ are executed or not, the
30 information being accepted in the third step, and of
31 displaying evaluation results on the display unit.

1 2. A method for evaluating security as claimed in claim 1,
2 wherein

3 the database describes, as to each of the security
4 countermeasures, a security type ensured by executing the
5 security countermeasure concerned, and wherein

6 the fourth step includes steps of:

7 classifying the security countermeasures, which are
8 read out in the second step, into the security types;

9 determining, as to each of the security types, the
10 ratio of the number of security countermeasures accepted as
11 executed in the third step, to the number of security
12 countermeasures classified into the security type
13 concerned; and

14 displaying on the display unit the ratio for each of
15 the security types as the degree of accomplishment of the
16 security countermeasures classified into the security type
17 concerned.

1 3. A method for evaluating security as claimed in claim 1,
2 wherein

3 the database describes, as to each of the security
4 countermeasures, a security type ensured and the degree of
5 risk avoided, by executing the security countermeasure
6 concerned, and wherein

7 the fourth step includes steps of;

8 classifying the security countermeasures, which are
9 read out in the second step, into the security types;

10 determining, as to each of the security types, the
11 total sum of the degrees of risks corresponding to the
12 security countermeasures accepted as non-executed in the
13 third step, out of the security countermeasures classified
14 into the security type concerned; and displaying on the
15 display unit the total sum of the degrees of risks for each
16 of the security types as the degree of the remaining risk
17 of the security countermeasures classified into the
18 respective security types.

1 4. A method for evaluating security as claimed in claim 1,
2 wherein

3 the database describes, as to each of the security
4 countermeasures, a security type ensured and a cost
5 required, by executing the security countermeasure
6 concerned, and wherein

7 the fourth step includes steps of:

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8 classifying the security countermeasures, which are
9 read out in the second step, into the security types;
10 determining, as to each of the security types, the
11 total sum of the costs corresponding to the security
12 countermeasures accepted as executed in the third step, out
13 of the security countermeasures classified into the
14 security type concerned; and displaying on the display
15 unit, the total sum of the costs for each of the security
16 types as the required cost of the security countermeasures
17 classified into the security type concerned.

1 5. A method for evaluating security as claimed in claim 1,
2 wherein
3 the database describes, as to each of the security
4 countermeasures, a security level ensured by executing the
5 security countermeasure concerned, and wherein
6 the first step includes a step of accepting from the
7 operator via the input unit, a third specification of the
8 security level of the system to be evaluated in addition to
9 the first specification of the system to be evaluated and
10 the second specification of the components constituting the
11 system, and wherein
12 the second step includes a step of reading out from
13 the database, the security countermeasures to be executed
14 to components constituting the system to be evaluated,
15 which are specified by the second specification, out of the

16 constituent components of the system type corresponding to
17 that of the system which is specified by the first
18 specification, each of the security countermeasures having
19 a level not higher than the security level specified by the
20 third specification.

1 6. A method for evaluating security as claimed in claim 1,
2 wherein

3 the first step includes,

4 steps of reading out all of the system types
5 described in the database, displaying them on the display
6 unit, and accepting from the operator via the input unit a
7 specification of any one of the system types being
8 displayed, as the first specification of the system to be
9 evaluated, and

10 steps of reading out from the database all of the
11 constituent components of the system type specified by the
12 first specification, displaying them on the display unit,
13 and accepting from the operator via the input unit,
14 information whether or not each of the constituent
15 components being displayed is used in the system to be
16 evaluated, as the second specification of each of the
17 components constituting the system to be evaluated.

1 7. A storage medium in which a program for making an
2 electronic computer evaluate security of a system

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3 constituted by at least one component is stored, the
4 program making the electronic computer execute steps of:
5 a first step of accepting a first specification of a
6 system to be evaluated and a second specification of each
7 of the components constituting the system, from an operator
8 via an input unit connected to the electronic computer;
9 a second step of retrieving data from a database in
10 which constituent components and security countermeasures
11 to be executed to the constituent components are described
12 for each of system types, and of reading out security
13 countermeasures to be executed to the components
14 constituting the system to be evaluated which are specified
15 by the second specification, out of the constituent
16 components of the system type, the system type
17 corresponding to that of the system to be evaluated which
18 is specified by the first specification;
19 a third step of displaying on a display unit
20 connected to the electronic computer, the security
21 countermeasures read out in the second step in
22 correspondence with each of the components constituting the
23 system to be evaluated which are specified by the second
24 specification and of accepting from the operator via the
25 input unit information whether or not each of the security
26 countermeasures being displayed is executed; and
27 a fourth step of evaluating a state of security of
28 the system to be evaluated, based on the information that

29 the security countermeasures to the components constituting
30 the system to be evaluated are executed or not, the
31 information being accepted in the third step, and of
32 displaying evaluation results on the display unit.

1 8. A program for making an electronic computer evaluate
2 security of a system constituted by at least one component,
3 the program making the electronic computer execute steps
4 of:

5 a first step of accepting a first specification of a
6 system to be evaluated and a second specification of each
7 of the components constituting the system, from an operator
8 via an input unit connected to the electronic computer;

9 a second step of retrieving data from a database in
10 which constituent components and security countermeasures
11 to be executed to the constituent components are described
12 for each of system types, and of reading out security
13 countermeasures to be executed to the components
14 constituting the system to be evaluated which are specified
15 by the second specification, out of the constituent
16 components of the system type, the system type
17 corresponding to that of the system to be evaluated which
18 is specified by the first specification;

19 a third step of displaying on a display unit
20 connected to the electronic computer, the security
21 countermeasures read out in the second step in

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22 correspondence with each of the components constituting the
23 system to be evaluated which are by the second
24 specification, and of accepting from the operator via the
25 input unit, information whether or not each of the security
26 countermeasures is executed; and

27 a fourth step of evaluating a state of security of
28 the system to be evaluated, based on the information that
29 the security countermeasures to the components constituting
30 the system to be evaluated are executed or not, the
31 information being accepted in the third step, and of
32 displaying evaluation results on the display unit.

1 9. A security evaluation apparatus for evaluating security
2 executed to a system constituted by at least one component,
3 comprising:

4 a database in which constituent components and
5 security countermeasures to be executed to the constituent
6 components are described for each of system types;

7 a first specification accepting unit for reading out
8 and displaying all of the system types described in the
9 database and accepting a specification of any one of the
10 system types being displayed, as a first specification of a
11 system to be evaluated from an operator;

12 a second specification accepting unit for reading out
13 from the database and displaying all of the constituent
14 components of the system type specified by the first

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15 specification, and for accepting from the operator
16 information whether or not each of the constituent
17 components being displayed is used in the system to be
18 evaluated, as a second specification of each of the
19 components constituting the system to be evaluated;

20 a third specification accepting unit for reading out
21 from the database and displaying the security
22 countermeasures to be executed to the constituent
23 components specified by the second specification, out of
24 the constituent components of the system types specified by
25 the first specification, and for accepting from the
26 operator information whether or not each of the security
27 countermeasures being displayed is executed; and

28 an evaluation unit for evaluating a state of security
29 of the system to be evaluated, based on the information
30 that the security countermeasures of the constituent
31 components are executed or not, the information being
32 accepted by the third specification accepting unit, and for
33 displaying evaluation results of the state of security.

1 10. A method for supporting making of security
2 countermeasures to be executed to a system constituted by
3 at least one component by the use of an electronic
4 computer, comprising steps of:

5 a first step of accepting a first specification of a
6 system to be supported and a second specification of each

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7 of the components constituting the system, from an operator
8 via an input unit connected to the electronic computer;

9 a second step of retrieving data from a database in
10 which constituent components and security countermeasures
11 to be executed to the constituent components are described
12 for each of system types and of reading out the security
13 countermeasures to be executed to the components
14 constituting the system to be supported which are specified
15 by the second specification, out of the constituent
16 components of the system type, the system type
17 corresponding to that of the system to be supported which
18 is specified by the first specification; and

19 a third step of displaying on a display unit
20 connected to the electronic computer, the security
21 countermeasures read out in the second step in
22 correspondence with each of the components constituting the
23 system to be supported which are specified by the second
24 specification.

1 11. A method for supporting the making of security
2 countermeasures as claimed in claim 10, wherein

3 the database describes, as to each of the security
4 countermeasures, a security type ensured by executing each
5 of the security countermeasure concerned, and wherein

6 the second step reads out from the database, the
7 security countermeasures and their security types for each

8 of the components constituting the system to be supported
9 which are specified by the second specification, out of the
10 constituent components of the system type corresponding to
11 that of the system to be supported which is specified by
12 the first specification, and wherein

13 the third step displays on the display unit the
14 security countermeasures and their security types which are
15 read out in the second step in correspondence with each of
16 the components constituting the system to be supported
17 which are specified in the second specification.

1 12. A method for supporting making of security
2 countermeasures as claimed in claim 10, wherein

3 the database describes, as to each of the security
4 countermeasures, a security level ensured by executing the
5 security countermeasure concerned, and wherein

6 the first step accepts from the operator via the
7 input unit a third specification of the security level to
8 be applied to the system to be supported in addition to the
9 first specification of the system to be supported and the
10 second specification of the components constituting the
11 system, and wherein

12 the second step reads out from the database the
13 security countermeasures to be executed to the components
14 constituting the system to be supported which are specified
15 by the second specification, out of the constituent

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16 components of the system type corresponding to that of the
17 system to be supported which is specified by the first
18 specification, each of the security countermeasures having
19 a level not higher than the security level specified by the
20 third specification.

1 13. A method for supporting making of security
2 countermeasures as claimed in claim 10, wherein
3 the first step includes,
4 steps of reading out all of the system types
5 described in the database, displaying them on the display
6 unit, and accepting from the operator via the input unit a
7 specification of any one of the system types being
8 displayed as the first specification of a system to be
9 supported, and
10 steps of reading out from the database all of the
11 constituent components of the system type specified by the
12 first specification, displaying them on the display unit,
13 and accepting from the operator via the input unit whether
14 or not each of the constituent components being displayed
15 is used in the system to be supported, as the second
16 specification of the components constituting the system to
17 be supported.

1 14. A storage medium in which a program for making an
2 electronic computer support making of security

3 countermeasures to be executed to a system constituted by
4 at least one component is stored, the program making the
5 electronic computer execute steps of:

6 a first step of accepting a first specification of a
7 system to be supported and a second specification of each
8 of the components constituting the system, from an operator
9 via an input unit connected to the electronic computer;

10 a second step of retrieving data from a database in
11 which constituent components and security countermeasures
12 to be executed to the constituent components are described
13 for each of system types and of reading out security
14 countermeasures to be executed to the components
15 constituting the system to be supported which are specified
16 by the second specification, out of the constituent
17 components of the system type, the system type
18 corresponding to that of the system to be supported which
19 is specified by the first specification; and

20 a third step of displaying on a display unit
21 connected to the electronic computer, the security
22 countermeasures read out in the second step in
23 correspondence with each of the components constituting the
24 system to be supported which are specified by the second
25 specification.

1 15. A program for making an electronic computer support
2 making of security countermeasures to be executed to a

3 system constituted by at least one component, the program
4 making the electronic computer execute steps of:

5 a first step of accepting a first specification of a
6 system to be supported and a second specification of each
7 of the components constituting the system, from an operator
8 via an input unit connected to the electronic computer;

9 a second step of retrieving data from a database in
10 which constituent components and security countermeasures
11 to be executed to the constituent components are described
12 for each of system types and of reading out security
13 countermeasures to be executed to the components
14 constituting the system to be supported which are specified
15 by the second specification, out of the constituent
16 components of the system type, the system type
17 corresponding to that of the system to be supported which
18 is specified by the first specification; and

19 a third step of displaying on a display unit
20 connected to the electronic computer, the security
21 countermeasures read out in the second step in
22 correspondence with each of the components constituting the
23 system to be supported which are specified by the second
24 specification.

1 16. A security construction support apparatus for
2 supporting making of security countermeasures to be
3 executed to a system constituted by at least one component,

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4 comprising:

5 a database in which constituent components and
6 security countermeasures to be executed to the constituent
7 components are described for each of system types;

8 a first specification accepting unit for reading out
9 all of system types described in the database to display
10 them and accepting from an operator a specification of any
11 one of the system types being displayed as a first
12 specification of a system to be supported;

13 a second specification accepting unit for reading out
14 from the database and displaying all of the constituent
15 components of the system type specified by the first
16 specification, and for accepting from an operator whether
17 or not each of the constituent components being displayed
18 is used in the system to be supported as a second
19 specification of each of the components constituting the
20 system to be supported; and

21 a security countermeasure display unit for reading
22 out from the database the security countermeasures to be
23 executed to the constituent components specified by the
24 second specification accepting unit, out of the constituent
25 components of the system type specified by the first
26 specification accepting unit, and for displaying them.